

(12) **UK Patent Application** (19) **GB** (11) **2 323 287** (13) **A**

(43) Date of A Publication 23.09.1998

(21) Application No 9705992.7

(22) Date of Filing 22.03.1997

(71) Applicant(s)

**Atlantech Medical Devices Limited**  
(Incorporated in the United Kingdom)  
Spa House, Hookstone Park, HARROGATE, HG2 7DB,  
United Kingdom

**Björn Engström**  
Orteng AB/ c/o Engstrom, Osmundsvagen 19,  
S-168 68 Bromma, Sweden

**Søren Winge**  
Speciallaege i ortopediskirurgi, Egirsvæj,  
DK-4000 Roskilde, Denmark

(72) Inventor(s)

**Nicholas Paul Woods**  
**Clive Bruce Reay-Young**  
**Björn Engström**  
**Søren Winge**

(51) INT CL<sup>6</sup>  
A61F 2/08

(52) UK CL (Edition P )  
A5R RAM

(56) Documents Cited  
GB 2288739 A US 5306301 A US 3896500 A

(58) Field of Search  
UK CL (Edition O ) A5R RAM  
INT CL<sup>6</sup> A61B 17/04 , A61F 2/08  
Online: WPI

(74) Agent and/or Address for Service

**Appleyard Lees**  
15 Clare Road, HALIFAX, West Yorkshire, HX1 2HY,  
United Kingdom

(54) Abstract Title  
A locating anchor

(57) A locating anchor for a replacement ligament is described. The anchor comprises a bar which is operable to extend across the opening of a bone tunnel through which the replacement ligament passes. The bar has a number of characterising features. The bar may not include any lateral support, the bar may be recessed, the bar may have a fixing groove, preferably, for ligament sutures or fixing means may be provided at each end of the bar to fix the ends of the bar in the bone surrounding the tunnel opening. A method of fixation is also defined. The bar is particularly useful in avoiding hindrance to the surgeon caused by the necessity to thread sutures through the fixation device.

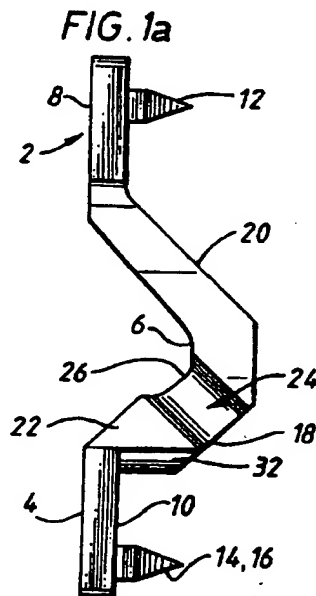


FIG. 1a

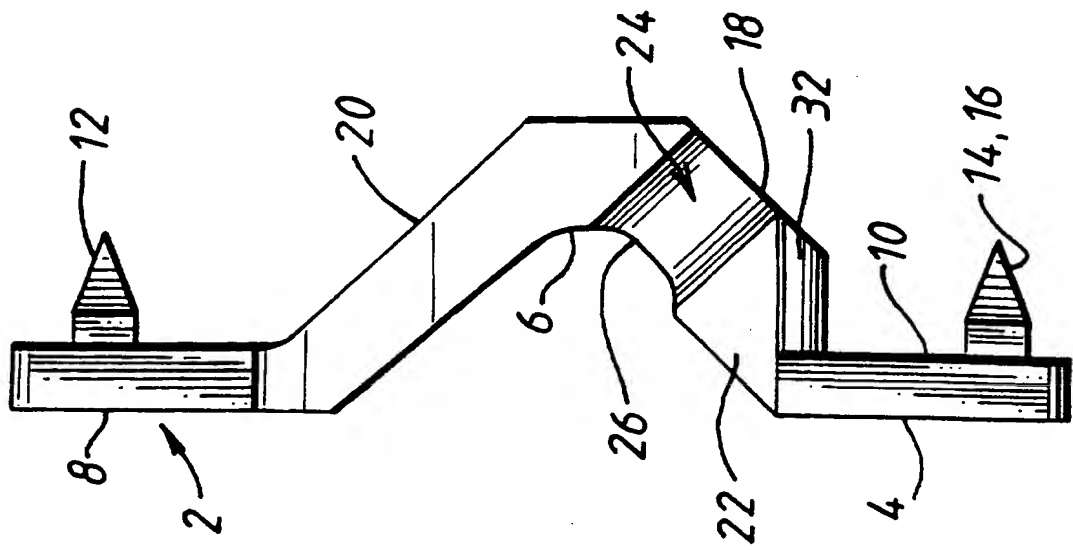
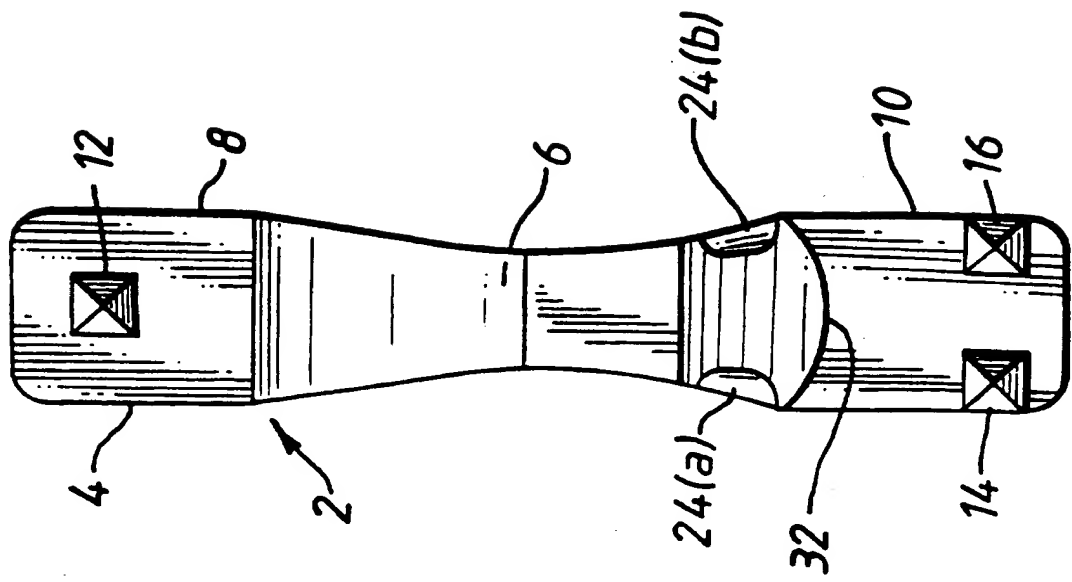
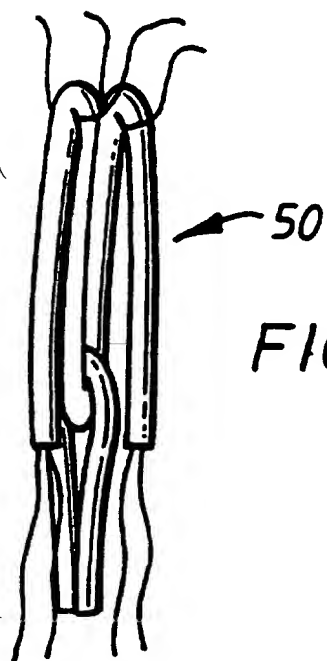
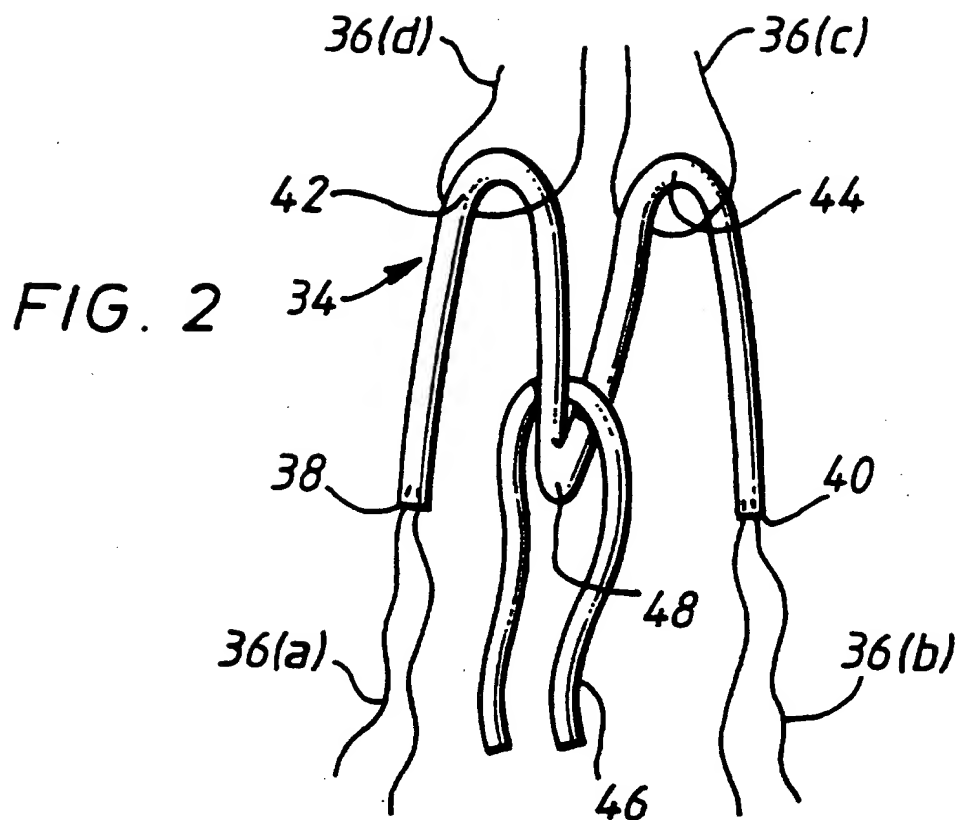
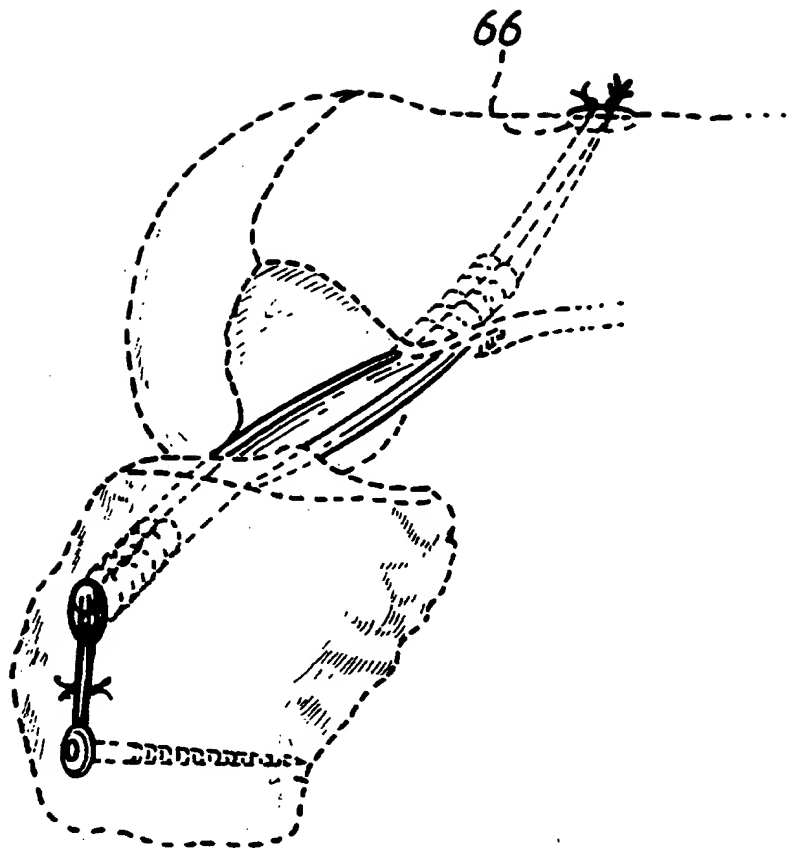


FIG. 1b







**FIG. 4**  
**(PRIOR ART)**

FIG. 5  
(PRIOR ART)

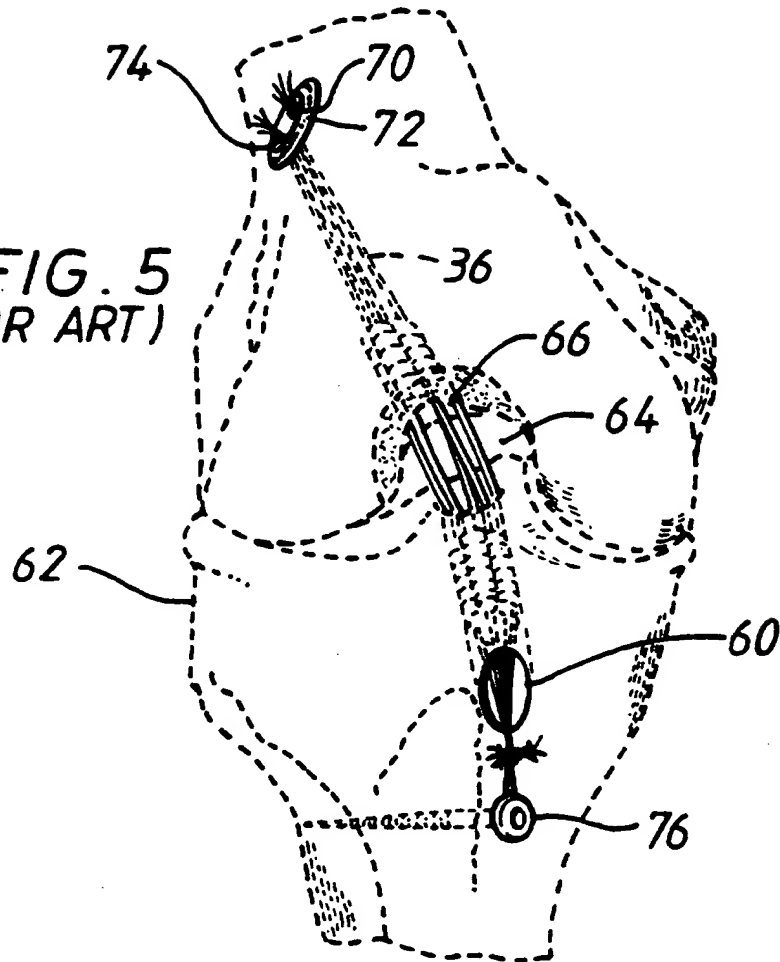


FIG. 6

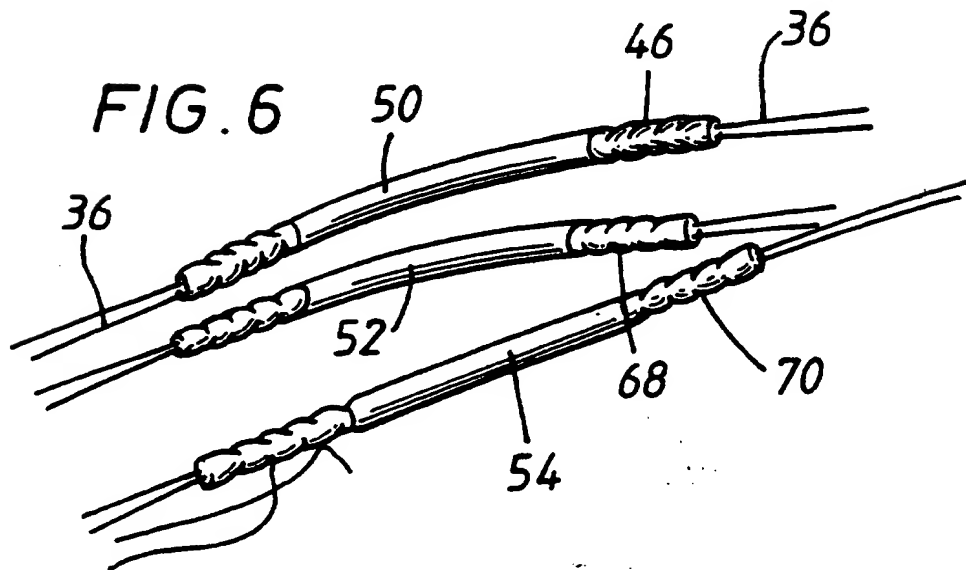
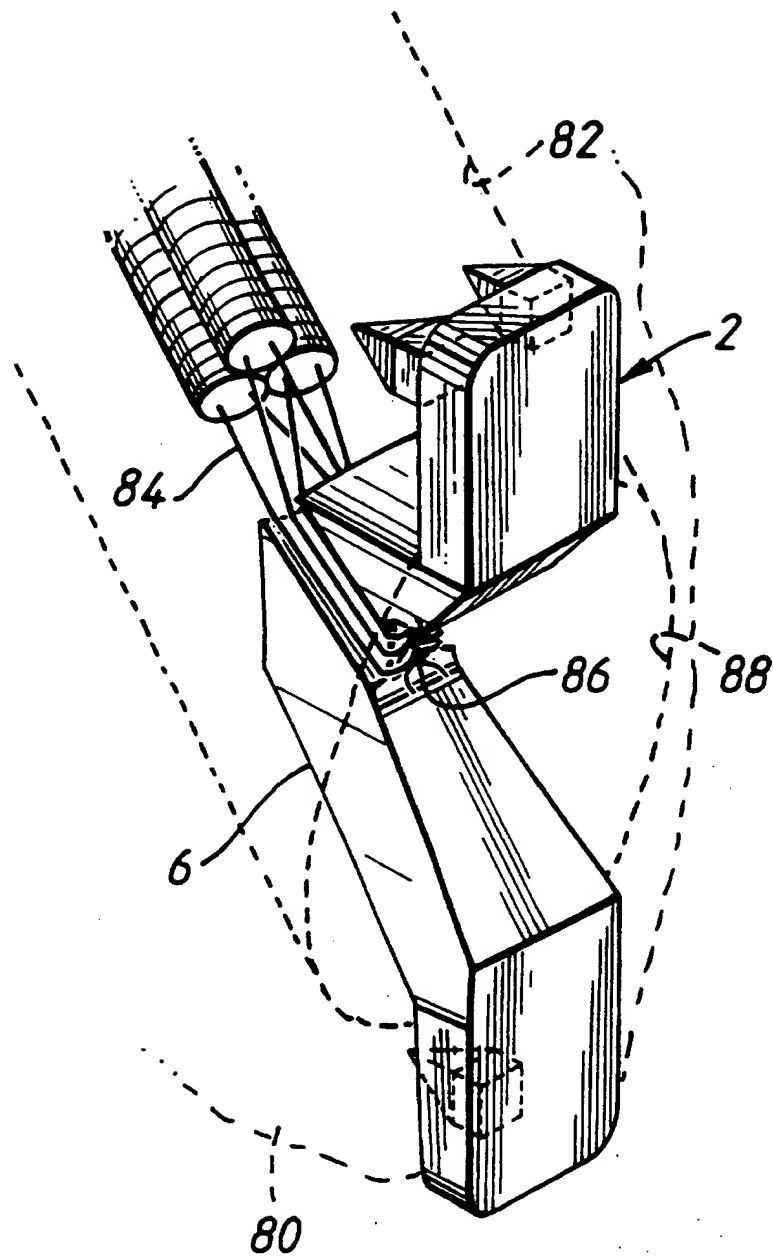


FIG. 7



**A LOCATING ANCHOR**

The present invention relates to a locating anchor for a replacement ligament.

- 5 Ligament damage and subsequent replacement is becoming an increasingly important issue facing modern surgeons. Modern sport and leisure activities are becoming an increasingly important aspect of daily life and modern sports demand an increasing level of fitness from its participants. Forces applied to knee ligaments, particularly the Anterior Cruciate (ACL) and Posterior  
10 Cruciate (PCL) ligaments, and particularly in active sports result in a high and increasing incidence of ligament injuries.

- A number of techniques have been made available to replace damaged ligaments. One technique involves the removal of a graft comprising existing  
15 bone-tendon-bone, for example, a dissected section comprising the middle third of patellar tendon and the part of the bony insertion at each end of this tendon which is then used to replace the damaged ligament. The method of replacement involves the drilling of a tunnel, in the case of an ACL ligament, in each of the femur and the tibia into which the bone blocks are fixed, the  
20 tendinous part of the graft forming the replacement ligament across the inside of the knee joint.

- Commonly the fixation of the bone blocks in the two tunnels is achieved by use of Titanium Screws which pass alongside the bone blocks, thereby  
25 producing an "Interference" fit.

The use of the Bone-tendon-bone with interference screw fixation is the most commonly employed method of ACL reconstruction. Unfortunately the